REMARKS

Claims 1-39 were presented for examination, and claims 1-14, 25, 27, and 29-33 are rejected. The Applicants wish to thank the Examiner for indicating that claims 15-24, 26, 28, and 34-39 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In the current amendment, claims 40-67 have been added. Claims 40-67 recite system claims that mostly parallel the pending method claims. No new matter has been introduced. Thus, upon entry of the current amendment, claims 1-67 will be presently pending in this application, of which claims 1, 33, 35, and 40 are independent. Applicants submit that pending claims 1-67 are in condition for allowance.

The following comments address all stated grounds of rejection. Applicants urge the Examiner to pass the claims to allowance in view of the remarks set forth below.

Claim Amendments

Applicants hereby add new claims 40-67 to more fully appreciate the Applicants' claimed invention. Support for the added claims can be found on page 4, lines 1-15; Figures 1 and 2; and throughout the remainder of the specification. No new matter has been introduced. Applicants submit that the presently pending claims are in condition for allowance.

Claim Rejections under 35 U.S.C. §102

I. Claims 1-3, 10-14, 25, 27, and 33 Rejected under 35 U.S.C. §102 as Anticipated by Aberg

Claims 1-3, 10-14, 25, 27, and 33 are rejected under 35 U.S.C. §102(e) as anticipated by U.S. Publication No. 2003/0018953 to Aberg ("Aberg"). Applicants respectfully traverse this rejection.

A. Patentability of Independent Claims 1 and 33

Independent claims 1 and 33 are a method and medium claim, respectively, and are directed towards a table-lookup method. These independent claims recite providing to a graphical block diagram model *a graphical block that defines a lookup table* and having inputs for receiving input data, and *using the graphical block to update content stored in the lookup table based on received input data.* Applicants submit that Aberg does not disclose each and every element of the claimed invention.

Applicants and Applicant's attorney are intimately familiar with Aberg. Aberg is assigned to the MathWorks, Inc., as is the current application. Moreover, Aberg is being prosecuted concurrently by the Applicants' attorney.

Aberg does not disclose *using a graphical block that defines a lookup table to update content stored in the lookup table based on received input data.* Rather, Aberg discusses using a graphical block that defines a lookup table to lookup a value to output to an interpolation block. Aberg seeks to separate index search functionality from the interpolation functionality. The content of the lookup table used by Aberg is static, and is searched to find a value based on an input value. As such, input received by Aberg is used to search for a corresponding value in the lookup table instead of being used to update content of the lookup table. Thus, Aberg does not discuss *updating the content stored in the lookup table* defined by a graphical block based on input received by the graphical block. Accordingly, Aberg fails to disclose *using a graphical block that defines a lookup table to update content stored in the lookup table based on received input data.*

In the Office Action, the Examiner cites paragraphs 2 and 4 of the background on page 1 of Aberg as disclosing the claimed invention. However, these cited paragraphs merely describe graphical block diagram modeling and an n-dimensional interpolation block that performs an index search operation and interpolated table lookup. The n-dimensional interpolation block referred to in Aberg does not *update content stored in the lookup table*

based on received input data. Instead, the n-dimensional interpolation block referred to by Aberg performs a search of breakpoint data content of the lookup table using an input value. If the input value matches a breakpoint data point of the lookup table, the n-dimensional interpolation block outputs the corresponding value. Otherwise, the n-dimensional interpolation block approximates an output value by interpolating between the appropriate breakpoint data values. The n-dimensional interpolation block of Aberg does not u*pdate content of the lookup table based on received input data*. Thus, the Examiner cited sections of Aberg fail to disclose the claimed invention.

For at least the above-discussed reasons, Aberg fails to disclose each and every element of independent claims 1 and 33. Claims 2-3, 10-14, 25, and 27 depend on and incorporate all the patentable limitations of claim 1. Thus, Aberg also fails to detract from the patentability of claims 2-3, 10-14, 25, and 27. Accordingly, Applicants respectfully request the Examiner to withdraw the Examiner's rejection of claims 1-3, 10-14, 25, 27, and 33 under 35 U.S.C. §102.

Claim Rejections under 35 U.S.C. §103

II. Claims 4-9 Rejected under 35 U.S.C. §103 as Unpatentable over Aberg in view of Zhang

Claims 4-9 are rejected under 35 U.S.C. §103(a) as unpatentable over Aberg in view of U.S. Patent No. 6,138,642 to Zhang et al. ("Zhang"). Applicants respectfully traverse this rejection.

A. Non-obviousness of Dependent Claims 4-9

Applicants contend that neither Aberg nor Zhang, alone or in combination, teach or suggest each and every feature of independent claim 1. Claims 4-9 depend on and incorporate all of the patentable subject matter of independent claim 1. Applicants submit

that Aberg in view of Zhang fails to teach or suggest each and every feature of dependent claims 4-9.

In the Office Action, the Examiner admits that Aberg does not disclose or suggest receiving input data and output data of a plant. The Examiner cites Zhang for the purpose of suggesting one ordinarily skilled in the art might modify Aberg to use plant data as recited in the features of dependent claims 4-9. However, Aberg in view of Zhang does not teach or suggest using the lookup table to capture the behavior of a plant as recited in claims 4-9. Rather, Zhang uses a lookup table to provide predetermined values that are hardware specific (see column 3, lines 45-49, Zhang). Instead of capturing plant behavior by updating the content of the lookup table based on plant input and output data, Zhang merely provides predetermined values from the lookup table to generate a compensation factor. Thus, Zhang fails to bridge the deficiencies of the Aberg reference regarding using the lookup table to capture the behavior of a plant. Therefore, Aberg in view of Zhang fails to teach or suggest each and every of dependent claims 4-9.

For at least the above-discussed reasons, Aberg in view of Zhang fails to detract from the patentability of dependent claims 4-9. Accordingly, Applicants respectfully request the Examiner to withdraw the Examiner's rejection of claims 4-9 under 35 U.S.C. §103.

III. Claims 29-32 Rejected under 35 U.S.C. §103 as Unpatentable over Aberg in view of Pomerantz

Claims 29-32 are rejected under 35 U.S.C. §103(a) as unpatentable over Aberg in view of U.S. Patent No. 4,270,503 to Pomerantz et al. ("Pomerantz"). Applicants respectfully traverse this rejection.

A. Non-obviousness of Dependent Claims 29-32

Applicants contend that neither Aberg nor Pomerantz, alone or in combination, teach or suggest each and every feature of independent claim 1. Claims 23-29 depend on and incorporate all of the patentable subject matter of independent claim 1. Applicants contend that Aberg in view of Pomerantz fails to teach or suggest each and every feature of dependent claims 29-32. In the Office Action, the Examiner admits that Aberg does not disclose or suggest an adaptation control signal to the lookup table as required by claim 29. The Examiner cites Pomerantz for the purpose of suggesting one ordinarily skilled in the art might modify Aberg to use an adaptation control signal as recited in the features of dependent claims 29-32. Pomerantz discusses using an update enable flag in a microprocessor to determine whether conditions exist to update a memory location of the lookup table (see column 11, lines 5-7, Pomerantz). In Pomerantz, a program reads the update enable flag to determine whether to update the memory location. In contrast, the claimed invention uses an adaptation control signal received as input to a graphical block of a graphical block diagram model. Thus, Pomerantz fails to bridge the deficiencies of the Aberg reference. Therefore, Aberg in view of Pomerantz fails to teach or suggest each and every feature of dependent claims 29-32.

For at least the above-discussed reasons, Aberg in view of Pomerantz fails to detract from the patentability of dependent claims 29-32. Accordingly, Applicants respectfully request the Examiner to withdraw the Examiner's rejection of claims 29-32 under 35 U.S.C. §103.

IV. New Claims 40-67 Patentably Distinguished Over Aberg

Independent claim 40 is directed towards a system for providing a table lookup method. This independent claim recites a graphical block associated with a graphical block diagram

model. The graphical block defines a lookup table and has inputs for receiving input data. The graphical block includes an updating mechanism to *update content stored in the lookup table of the graphical block based on received input data.* None of the cited references, including Aberg, disclose, teach, or suggest *a graphical block with a mechanism for updating content stored in the lookup table of the graphical block based on received input data.*

Applicants respectfully submit that none of the cited references, including Aberg, disclose, teach, or suggest each and every element of independent claim 40. Claims 41-67 depend on and incorporate the patentable subject matter of independent claim 40. As such, none of the cited references disclose, teach, or suggest each and every element of claims 41-67. Therefore, Applicants respectfully submit that claims 40-67 are patentable and in condition for allowance.

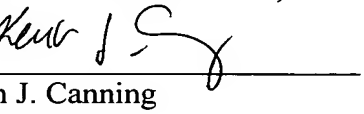
CONCLUSION

In view of the amendments and remarks set forth above, Applicants contend each of the presently pending claims in this application is in immediate condition for allowance. Accordingly, Applicants respectfully request the Examiner to pass the claims to allowance.

If the Examiner deems there are any remaining issues, we invite the Examiner to call the Applicants' Attorney at the telephone number identified below.

Respectfully submitted,
LAHIVE & COCKFIELD, LLP

Dated: October 5, 2005

By 
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